

# Euclid Corridor Transportation Project

Cleveland, Ohio  
(November 2002)

## Description

The Greater Cleveland Regional Transit Authority (GCRTA) is proposing to implement a 9.8-mile bus rapid transit (BRT) system that would incorporate exclusive BRT lanes and related capital improvements on Euclid Avenue from Public Square in the Cleveland central business district (CBD) east to University Circle. The Euclid Corridor Transportation Project (ECTP) also includes the construction of an intermodal transit center at the eastern portion of the corridor, improvements to East 17<sup>th</sup>/East 18<sup>th</sup> Streets, and a “transit zone” on St. Clair and Superior Avenues utilizing exclusive BRT lanes. GCRTA is also planning to procure twenty 60-foot articulated hybrid-electric buses with left-hand and right-hand side doors for access and egress of patrons in the corridor. The ECTP vehicles would have access to the entire Euclid Avenue Corridor. Conventional buses would primarily operate outside of the Cleveland CBD. The proposed BRT system would provide rapid transit service to the University Circle area and continue to the City of East Cleveland and terminate at the existing Louis Stokes/Windermere rapid transit station. Increased intermodal access between the proposed BRT and two existing rail rapid transit stations (Tower City in downtown Cleveland and Louis Stokes at University Circle), along with the construction of two transit centers, only one of which (the Eastside Transit Center) would be funded with Section 5309 New Starts funds, would also be achieved.

GCRTA anticipates that with the implementation of exclusive BRT lanes, signal prioritization and pedestrian zone improvements along Euclid Avenue, the ECTP would improve transit ridership between the region’s two largest employment centers: Cleveland’s CBD and University Circle. Implementation of the ECTP is also anticipated to result in a 20 percent decrease (eight minute reduction) in travel time along Euclid Avenue – GCRTA’s most heavily utilized bus route that operates between the region’s two main employment centers. GCRTA also expects that improvements to East 17<sup>th</sup>/East 18<sup>th</sup> Streets would enhance cross-town bus circulation in the Cleveland CBD and allow the streets to function as north/south arterials.

Summary Description	
<b>Proposed Project:</b>	Bus Rapid Transit Line 9.8 Miles, 30 Stations
<b>Total Capital Cost (\$YOE):</b>	\$245.7 Million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$122.8 Million (50%)
<b>Annual Operating Cost (2020 \$YOE):</b>	\$1.2 Million
<b>Ridership Forecast (2025):</b>	29,500 Average Weekday Boardings 2,400 Daily New Riders
<b>Opening Year Ridership Forecast (2006):</b>	30,500 Average Weekday Boardings
<b>FY 2004 Finance Rating:</b>	Medium
<b>FY 2004 Project Justification Rating:</b>	Medium
<b>FY 2004 Overall Project Rating:</b>	Recommended

The *Recommended* rating is primarily based on the strength of the transit-supportive land use elements of the Euclid Avenue Corridor and the sufficiency of the project's financial plan. The overall project rating applies to this *Annual Report on New Starts* **and reflects conditions as of November 2002**. Project evaluation is an ongoing process. As New Starts projects proceed through development, the estimates of costs, benefits, schedules and impacts are refined. **The FTA's ratings and recommendations will be updated annually to reflect new information, changing conditions and refined financing plans.**

## Status

In November 1995, the GCRTA Board of Trustees selected the ECTP as the Locally Preferred Alternative (LPA). The LPA included the construction of a busway along Euclid Avenue and the rehabilitation and relocation of several existing rail rapid transit stations. In December 1995, the Northeast Ohio Areawide Coordinating Agency – the local Metropolitan Planning Organization – adopted a resolution supporting the ECTP. FTA approved GCRTA's request to initiate Preliminary Engineering on the ECTP in September 1996. In 1999, GCRTA reconfigured the scope of the ECTP to incorporate only the construction of a busway along Euclid Avenue. The rapid rail elements were eliminated from the ECTP proposal for Section 5309 New Starts funding. GCRTA completed the environmental review process for the ECTP in September 2001 with FTA's issuance of a Finding of No Significant Impact. FTA approved the ECTP into Final Design in July 2002. In October 2002, GCRTA reconfigured the scope of the ECTP to include the construction of the Eastside Transit Center (ESTC), located at University Circle. The ESTC would function as a hub for bus traffic serving the campus of Cleveland State University and the rest of downtown Cleveland. The ESTC would also link other GCRTA services facilitating convenient transfers between bus lines and eliminating on-street bus layovers.

Section 3030(a)(17) of TEA-21 authorized the "Euclid Corridor Extension" for Final Design and construction. Through FY 2002, Congress has appropriated \$19.38 million in Section 5309 New Starts funds for the ECTP. Of this amount, Congress reprogrammed \$4.72 million to other projects.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Reporting Instructions for the Section 5309 New Starts Criteria*, updated in June 2002. The project will be reevaluated in the next *Annual Report on New Starts*.

Project Justification Quantitative Criteria		
Mobility Improvements Rating: Low-Medium		
Average Employment Per Station Average Low Income Households Per Station Transportation System User Benefit Per Project Passenger Mile (Minutes)	<u>New Start vs. Baseline</u>	
	5,911	
	367	
	1.0	
Environmental Benefits Rating: Medium-High		
<u>Criteria Pollutant Reduced</u> (tons)	<u>New Start vs. Baseline</u>	
Carbon Monoxide (CO)	70	
Nitrogen Oxide (NO <sub>x</sub> )	502	
Hydrocarbons	0.2	
Particulate Matter (PM <sub>10</sub> )	[1]	
Carbon Dioxide (CO <sub>2</sub> )	5,720	
<u>Annual Energy Savings</u> (million) BTU	74,800	
Cost Effectiveness Rating: Low		
	<u>New Start vs. Baseline</u>	
Cost per Transportation System User Benefit (current year dollars/hour)	\$35.40	
Operating Efficiencies Rating: Medium		
	<u>Baseline</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (current year dollars)	\$0.73	\$0.73

[ ] indicate an increase in emissions.

## **Project Justification**

### **Rating: Medium**

The *Medium* project justification rating is based on the strong transit-supportive land use environment of the Euclid Avenue Corridor, the number of low-income households served, and the corridor's employment market. With the continued improvement in FTA's project evaluation process, including the introduction of the transportation system user benefit measure, the value of proposed transit projects can be more accurately assessed. Accordingly, FTA intends to put additional emphasis on the cost-effectiveness measure. This year, this project has received a "low" rating for cost-effectiveness, which raises concerns about the merits of the project for Federal funding. FTA strongly encourages sponsors to improve the cost-effectiveness of the project.

Based on 2000 Census data, GCRTA estimates that there are a total of 16,892 low-income households located within a ½-mile radius of proposed ECTP station areas. This represents approximately 73 percent of the total households within a ½-mile radius of the proposed project. GCRTA also estimates that the ECTP would serve approximately 195,350 jobs that are located within a ½-mile radius of proposed station areas. The City of Cleveland is classified as a “maintenance area” for ozone and a “moderate non-attainment area” for particulate matter. GCRTA estimates that the ECTP has an incremental cost per incremental trip value of \$34.03.

### **Existing Land Use, Transit-Supportive Land Use Policies and Future Patterns** **Rating: Medium-High**

The *Medium-High* land use rating reflects the strong existing land use and high trip generators in the Euclid Avenue Corridor, as well as the transit-supportive land use policies within the Cleveland central business district (CBD) and much of the remainder of the corridor.

**Existing Conditions:** The downtown area adjacent to Euclid Avenue includes high-density commercial uses (office and retail), a theater district, the campus of Cleveland State University, and a professional sports complex. Several institutional and cultural uses are located in the University Circle area, including Case Western Reserve University, the Cleveland Clinic Foundation, and four museums. The Midtown area, located between the CBD and University Circle, is characterized by underutilized commercial and industrial land. Multi-family and single-family housing on a grid street pattern is located one to two blocks away from Euclid Avenue throughout most of the corridor. In 1995, total employment in the Cleveland CBD was approximately 122,000, while total employment in the corridor as a whole (a ½-mile radius of the 9.8-mile busway project) was estimated at 207,000. Total corridor population was estimated at 41,000, at an average density of 7,400 persons per square mile. Evidence of a reversal of previous declining population and employment trends is supported by recent increases in residential development in the Cleveland CBD and two corridor neighborhoods, and by commercial redevelopment in the Midtown area.

**Future Plans, Policies and Performance:** A wide range of City, small area, and institutional plans have been developed that focus on promoting redevelopment and on creating a more pedestrian-friendly, transit-oriented environment in the CBD and the Euclid Avenue Corridor. The City of Cleveland, including the Midtown area, also has a strong network of local development corporations and business organizations that act in partnership with the public sector in promoting redevelopment. Zoning in the Midtown area is anticipated to be revised to convert industrial areas to office uses and to allow mixed-use activities, and a pedestrian retail overlay district has been adopted that could be applied to portions of the corridor. Conceptual plans have been developed for some neighborhoods, with demonstrated examples of redevelopment activities consistent with these plans. Institutional plans also stress creating a more pedestrian-friendly environment and increasing institutional-related development in specific areas. Planning activities specific to the Euclid Corridor Transportation Project have also been undertaken. These include an economic development plan for the corridor, street design guidelines, and Transit-Supportive Principles and Development Guidelines that specify guidelines for transit-supportive building design and placement. GCRTA and the City of Cleveland have been working with local institutions and business groups to raise awareness of

transit-oriented design principles and specifically to incorporate these principles into development along Euclid Avenue. At a regional level, some recent efforts are being demonstrated to support reinvestment in fully developed communities and existing infrastructure.

## **Other Factors**

**Potential Redevelopment Near ECTP Station Areas:** The ECTP Economic Development Plan (September 2001) projects that the proposed ECTP Busway could yield approximately 9.2 million square feet of commercial development and 7,700 residential units (15,500 people) in the year 2025, including the downtown Cleveland area. These figures include an additional 6.2 million square feet and 5,350 residential units that could occur in conjunction with the proposed busway and transit-supportive land use policies. These projections reflect a capture rate of 16 percent of regional commercial development and 12 percent of regional residential construction in the Euclid Avenue Corridor by the forecast year 2025.

## **Local Financial Commitment**

### **Rating: Medium**

The *Medium* local financial commitment rating was determined by the *Medium* rating for the capital financing plan and the *Medium* rating for the operating financing plan.

## **Proposed Non-Section 5309 New Starts Share of Total Project Costs: 50%**

### **Rating: Medium**

The financial plan for the Cleveland – Euclid Corridor Transportation Project includes Section 5309 New Starts funds, State Flexible Funds, GCRTA revenues, City of Cleveland appropriations and CMAQ funds from the Northeast Ohio Areawide Coordinating Agency (NOACA).

<b>Locally Proposed Financial Plan</b>		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Percent of Total</u></b>
<b>Federal:</b> Section 5309 New Starts	\$122.8	50.0 %
<b>State:</b> Flexible Funds: State of Ohio – TRAC Program*	\$59.0	24.0 %
<b>Local:</b> GCRTA City of Cleveland NOACA	\$35.8 \$18.0 \$10.0	14.6 % 7.3 % 4.1 %
<b>Total:</b>	<b>\$245.7</b>	100.0 %

**NOTE:** Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions. Total may not add due to rounding.

\* The State of Ohio, through the Transportation Review Advisory Council (TRAC), has committed Federal Flexible funds (CMAQ or STP) to the ECTP. These will be 100 percent Federal funds that will be matched by toll credits from the Ohio Department of Transportation. Section 1111(j) of TEA-21 (formerly Section 1044 of ISTEA) permits states to earn credits on toll revenue expenditures and for states to apply these credits as match toward the non-Federal matching share requirement for Federal-aid projects.

## **Stability and Reliability of Capital Financing Plan**

### **Rating: Medium**

The *Medium* rating reflects the commitment of the non-Section 5309 New Starts share of the ECTP's total estimated capital costs, including commitments from the Ohio Department of Transportation and NOACA. However, the rating also reflects FTA's determination that GCRTA should ensure that sufficient contingencies exist to cover any unanticipated cost overruns.

**Agency Capital Financial Condition:** GCRTA's financial condition is sound, reflecting the agency's stewardship of Federal, State and local funds. The agency is currently replacing its bus fleet. Bus replacement is scheduled for completion at the end of 2002. When completed, the average age of GCRTA's bus fleet will be reduced from 8.8 years to 6.4 years. The average age of the agency's heavy rail and light rail fleet is approximately 16 years, and 18 years, respectively. GCRTA's bonds have received upper grade ratings of 'AAA' by Fitch and 'Aaa' by Moody's Investors, Inc. However, GCRTA's continuing ability to apply sales tax revenue to the agency's capital projects will depend on the agency's ability to maintain a positive operating balance, since growth in sales taxes is projected to slow compared to rates experienced in previous years. In addition, while GCRTA's ability to issue General Obligation bonds is

constrained by several [locally-mandated] statutory ceilings, a substantial margin remains for borrowing before these limits are reached.

**Capital Cost Estimate and Contingencies:** The total estimated capital cost for the ECTP increased approximately nine percent from the estimate reported in last year's *Annual Report on New Starts*. This is a result of GCRTA's inclusion of the construction of the Eastside Transit Center (ESTC) in the scope of the ECTP proposal for Section 5309 New Starts funds. At this time, the total estimated capital cost for the ECTP is reasonable at this stage of project development. However, as noted previously, the current total capital cost estimate entails a degree of uncertainty and will be closely monitored by GCRTA for any potential cost saving measures that could be undertaken to keep estimates, including contingencies for the ESTC, within GCRTA's overall budget for the ECTP. In addition, GCRTA will reevaluate the capital cost estimates and contingencies associated with the ESTC and the modification of basement area vaults that are located along Euclid Avenue for accuracy and to ensure that the estimates remain within the overall budget for the ECTP.

**Existing and Committed Funding:** At this time, approximately 85 percent (\$104.8 million) of the total non-Section 5309 New Starts share of the project's total estimated capital cost has been committed to the ECTP by the Ohio Department of Transportation, GCRTA and NOACA. The remaining 15 percent (\$18 million) consists of local funds from the City of Cleveland. The City and GCRTA are scheduled to execute a revised Interagency Agreement regarding the City's contribution to the project in February 2003. In October 2002, NOACA formally committed \$10 million for the construction of the ECTP. These monies will be provided from the region's allocation of Congestion Mitigation and Air Quality (CMAQ) funds.

**New and Proposed Sources:** No new capital funding sources are proposed for the construction of the ECTP.

## **Stability and Reliability of Operating Finance Plan**

### **Rating: Medium**

The *Medium* rating reflects the stable operating condition of GCRTA. Revenues to operate the proposed ECTP are sufficient.

**Agency Operating Financial Condition:** GCRTA's operating condition is sound. In 2001, GCRTA provided approximately 60 million passenger trips systemwide. GCRTA's 20-year cash flow analysis incorporates a reduced rate of sales tax increase for 2000-2001, but the pace of sales tax revenue growth is projected to rise again in future years, primarily due to the economic development (residential and commercial) that are anticipated along the Euclid Avenue Corridor, resulting in reasonable agency-wide financial conditions.

**Operating Cost Estimates and Contingencies:** Annual operating and maintenance costs for the ECTP are estimated at \$1.2 million (escalated dollars). These estimates do not include operating expenses associated with Euclid Avenue right-of-way maintenance (\$0.4 million) or the intermodal transit centers (\$0.07 million). These estimates are considered reasonable. GCRTA currently operates a significant level of bus service within the Euclid Avenue Corridor – the

agency's most heavily utilized bus route. GCRTA anticipates that, with the implementation of the proposed ECTP, the agency would realize significant operational savings by reducing annual operating and maintenance costs associated with conventional buses that currently operate along Euclid Avenue.

**Existing and Committed Funding:** All proposed sources for operating funds exist. Incremental operating costs are anticipated to be modest. In addition, GCRTA's projections indicate that increases in passenger fares and sales tax revenue resulting from the commencement of service on the ECTP are expected to meet the majority, if not all, of the additional operating costs associated with the ECTP. However, GCRTA did not document the underlying assumptions of the operating revenue sources included in the plan that are anticipated to cover the ECTP's projected operating expenses.

**New and Proposed Funding Sources:** No new sources of operating funds are proposed for the Euclid Corridor Transportation Project.



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Cleveland, Ohio



